

REMARKS

In response to the Office Action dated June 29, 2007, claims 1 and 6 are amended. Claims 1-7 are now active in this application. The amendment is supported, at a minimum, by FIG. 1. No new matter has been added. Please note that a preliminary amendment was previously filed on May 11, 2005.

Claims 1-7 were rejected under 35 U.S.C. § 102(e) as being anticipated by Hosokawa et al. (U.S. 2004/0105472). Note that page 2 of Office Action merely states that claims “1 and 3-7” are rejected. However, claim 2 is specifically addressed on page 3 of the Office Action. Thus, Applicant interprets the Office Action as rejecting claims 1-7. This rejection is traversed.

Amended claim 1 recites, in pertinent part, “the heat sink portion is fixed to the base portion in such a way that the element mount surface is located inward of an inner side surface of the depression, and that **a clearance is provided between a lower end portion of the element mount surface and a bottom surface of the depression.**”

As an illustrative example of claim 1, please note that in the present application a clearance is provided between the lower end portion of the element mount 7 and the bottom portion 14 of the depression 9, as shown in FIGS. 1, and 3-6. This clearance prevents the lower end portion of the semiconductor laser 4 or the submount 8 from making contact with the inner side surface of the depression 9 even when an error occurs in fixing the heat sink portion 3 to the base portion 2, ensuring that the heat sink portion 3 makes contact with the semiconductor laser element 4 or the submount 8. This clearance helps prevent deterioration in heat dissipation efficiency, as described in the present specification at page 9, line 23 to page 11, line 5. In addition, this clearance makes it possible to easily mount the semiconductor laser element 4 that

is longer than the element mount surface without letting the semiconductor laser element 4 stick out of the upper edge of the heat sink portion 3.

Anticipation under 35 U.S.C. § 102 requires that “each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed Cir. 1987). At a minimum, the cited prior art does not disclose (expressly or inherently) the above recited limitation.

The Office Action, at page 3, asserts that Hosokawa discloses “base portion having a horizontal top surface” and “a heat sink portion that has a vertical mounting element and is located above the top surface of the base portion” at FIG. 3 element 1 (base) and element 17 (metal block or heat sink) of Hosokawa.

However, FIG. 3 of Hosokawa et al. merely discloses a lower end portion of a metal block 17 (apparently corresponding to the “heat sink portion” of the present invention) making contact with a plane 8 of a recess 5. Thus, in Hosokawa, the length of a semiconductor laser element 3 that can be mounted on the metal block 17 without sticking out of the upper edge of the metal block 17 is equal to or shorter than that of the element mount surface (the internal surface) of the metal block 17. Additionally, in Hosokawa FIG. 3, no portion of the laser element 3 is disposed below the metal block or heat sink 17.

In contrast to Hosokawa et al., independent claim 1 requires that a clearance is provided between a lower end portion of the element mount surface and a bottom surface of the depression.

Thus, Applicant submits that amended claim 1 is not anticipated by Hosokawa.

Under Federal Circuit guidelines, a dependent claim is allowable if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as independent claim 1 is patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable.

Thus, it is respectfully submitted that dependent claims 2-7 are also patentable for at least the same reasons as independent claim 1.

For example, dependent claim 6 recites “the depression has a rough bottom surface that can **diffusely reflect secondary laser light.**”

The Office Action, at page 4, asserts that it is inherent for all surfaces to have some roughness. Applicants have amended claim 6 to recite “a rough bottom surface that can **diffusely reflect secondary laser light.**” Thus, Applicants submit that the feature of dependent amended claim 6 is not inherent, and that dependent claim 6 is allowable for this reason, in addition to the same reasons as independent claim 1.

Accordingly, it is urged that the application, as now amended, is in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, Examiner is requested to call the undersigned attorney at the telephone number shown below.

Application No.: 10/578,869

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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